

## We Claim:

1. A method for data retrieval in an analysis system, comprising the steps of:
 

receiving a request for data specified by at least one parameter;

determining if said requested data has been previously requested within a predetermined period of time;

retrieving said requested data from a database if the requested data was not previously requested within said predetermined period of time;

storing said requested data in n-dimensional parameter space, wherein said at least one parameter points to the address where the requested data is stored;

and

mapping requests for said requested data received within said predetermined period of time to said address in n-dimensional space.
2. The method for data retrieval according to claim 1, wherein requestors are queued until an initial data request is retrieved.
3. The method for data retrieval according to claim 1, further comprising the step of:
 

removing the requested data from the n-dimensional space at the end of said predetermined period of time.
4. The method for data retrieval according to claim 1, further comprising the step of:
 

providing a parallel parameter space for providing error messaging to requestors.

5. The method for data retrieval according to claim 1, further comprising the steps of:  
determining if a previous request for said requested data is currently being filled; and  
queuing the data request until said previous request has been filled.
6. A data management system for data retrieval in an analysis system, comprising:  
means for receiving a request for data specified by at least one parameter;  
means for determining if said requested data has been previously requested within a predetermined period of time;  
means for retrieving said requested data from a database if the requested data was not previously requested within said predetermined period of time;  
means for storing said requested data in n-dimensional parameter space, wherein said at least one parameter points to the address where the requested data is stored; and  
means for mapping requests for said requested data received within said predetermined period of time to said address in n-dimensional space.
7. The data management system according to claim 6, wherein requestors are queued until an initial data request is retrieved.
8. The data management system according to claim 6, further comprising:  
means for removing the requested data from the n-dimensional space at the end of said predetermined period of time.

9. The data management system according to claim 6, further comprising:  
means for providing a parallel parameter space for providing error messaging to requestors.
10. The data management system according to claim 6, further comprising:  
means for determining if a previous request for said requested data is currently being filled; and  
queuing the data request until said previous request has been filled.
11. A data management system connected to a data collection system, comprising:  
a processor connected to said data collection system and at least one analysis system;  
at least one n-dimensional storage means connected to said processor for storing requested data,  
wherein when said process receives a request for data specified by at least one parameter from said at least analysis system, said processor determines if said requested data has been previously requested within a predetermined period of time, and retrieves said requested data from a database in said data collection system if the requested data was not previously requested within said predetermined period of time, the processor then stores said requested data in n-dimensional storage means, wherein said at least one parameter points to the address where the requested data is stored, and maps requests for said requested data received within said predetermined period of time to said address in n-dimensional storage means.

12. The data management system according to claim 11, wherein requestors are queued until an initial data request is retrieved.
13. The data management system according to claim 11, wherein said processor removes the requested data from the n-dimensional storage means at the end of said predetermined period of time.
14. The data management system according to claim 11, further comprising:  
means for providing a parallel parameter space for providing error messaging to requestors.
15. The data management system according to claim 11, further comprising:  
means for determining if a previous request for said requested data is currently being filled; and  
queuing the data request until said previous request has been filled.